

OLDEST BEE PAPER
IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED
IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

Vol. XVIII.

Chicago, Ill., October 11, 1882.

No. 41.

THE AMERICAN BEE JOURNAL

Published every Wednesday by

THOMAS C. NEWMAN,

EDITOR AND PROPRIETOR,

925 WEST MADISON ST., CHICAGO, ILL.

At \$2.00 a Year, in Advance.

Any person sending a club of six is entitled to an extra copy (like the club) sent to any address desired. Sample copies furnished free.

George Neighbour & Sons, London, England, are our authorized agents for Europe.

Postage to Europe 50 cents extra.

Entered at Chicago post office as second class matter.

TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.....	641
Honey Show at Stratford, Ontario.....	641
Healthfulness of Honey.....	642
Wintering Bees.....	642
Wire Frame Holder.....	642
Bees still working on Sweet Clover.....	642
Feed no Glucose to Bees.....	642
The Northwestern Convention.....	642

Convention Notes—

Local Convention Directory.....	643
Ontario Bee-Keepers' Convention.....	643
Prize Essay on Wintering Bees.....	644
The National Convention.....	646
Our Honey Market.....	646
President Cook's Address.....	646
Foul Brood.....	647
Too Late.....	648
Convention Notices.....	648

Correspondence—

Apiarian Salmagundi.....	649
Poisonous Gases around Bee Hives.....	649
Glucose Detective.....	649
Some Hints about Conventions.....	650

Selections from Our Letter Box—

Good work in Extracting.....	650
My Third Annual Report.....	650
A Scotch Beekeeper in Texas.....	650
Bee and Honey Show in London, Ont.....	651
That Champion Colony.....	651
A Good Profit.....	651
Bees have done fairly.....	651
Position of pure air in rooms.....	651
Botanical.....	651
From Minnesota.....	651
Good Report from Michigan.....	652
Bees still gathering Honey.....	652
A Tremendous Report.....	652
Seed of the Golden Honey Plant.....	652

Business Notices—

MONTHLY BEE JOURNAL FOR 1883.....	652
Premiums.....	652
Clubbing List.....	653
Honey as Food and Medicine.....	653
Honey and Beeswax Market.....	653
The Apiary Register.....	653



Honey Show at Stratford, Ont.

A correspondent writes us as follows, concerning the recent honey show in connection with the Agricultural Fair, at Stratford, Ontario, Canada:

The efforts of the BEE JOURNAL are bearing fruit in the increased attention and interest taken in the gentle craft of bee-keeping. As a rule, the display of honey at the agricultural shows in Canada has been confined to a jar or two of thick looking stuff, and a couple of boxes of comb honey, which are sandwiched in between some dirty looking grape sugar, and three or four cakes of home made soap. The display made by Mr. Jones at Toronto, the past year or two, has enthused local apiarists all over the country, and if the directors of the County Fairs only act decently, the show of bee products may be made a prominent feature.

At the County of Perth Exhibition, held at Stratford, Ont., last week, Mr. D. Chalmers, of the Honey Grove Apiary at Musselburg, occupied quite a large display, his tempting goods being arranged in glass bottles, pound sections and Jones honey pails with gorgeous labels. He drove quite a thriving business, and carried off the first prize for section, and the second for extracted honey. He also displayed to wondering crowds a full supply of almost everything used in the honey business.

Dr. Shaver, of Stratford, an enthusiastic apiarist, devoted himself entirely to comb honey, having a pyramid of several hundred one-pound sections, graded according to the source of supply—the clover, thistle, basswood, goldenrod, etc., being clearly distinguishable from the color.

Mr. Young, an amateur of the first year, captured the first prize for extracted honey. The fall flow here has been immense, and the yield a large average.

At the recent Fair at Hamilton, Ont., there was a very good exhibit of hives, bees, honey and apiarian supplies. The first prize for bees was awarded to Mr. A. Robertson, of Carlisle; 2d, to Rennie Bros., of Hamilton; 1st for hive to Mr. McEvoy, Woodburn; 1st for comb honey to Mr. McEvoy; 2d to Mr. C. Marshall, Binbrook; 1st for extracted honey to Mr. McEvoy; 2d to C. Marshall. The bee-keepers on the ground met and formed themselves into the Wentworth, Ont., Bee-Keepers' Association, with the following officers for the first year: 1st Prest., J. M. Knowles, West Flambro; 2d Prest., J. H. Cornell, Lynden; Treas., A. Robertson, Carlisle; Sec'y, Geo. N. Henderson, Hamilton. The meeting adjourned to meet on the first Saturday in November at the Dominion Hotel, Hamilton; 20 members were enrolled.

At the Baltimore Fair there was an exhibition of bees, honey and apiarian equipments. Under the superintendency of Mr. Charles H. Lake, there was a special tent for the display and manipulation of bees, etc., and all bee-keepers were invited to join in making an effective and attractive display. We hope they did so, but as yet we are not informed on the subject.

The Rev. W. F. Clarke's address will hereafter be Winnipeg, Manitoba, to which place he has removed to take editorial charge of the Winnipeg Sun. The BEE JOURNAL extends congratulations.

A Test for Honey.—In Prof. Maher's article on this subject on page 610, an error was made, which needs correction. In the fourth line of the third paragraph read "weak" for white, thus: "with a weak solution," etc.

Healthfulness of Honey.

Pliny, the Roman historian, speaks of Rumilius Pollio, who possessed marvelous health and strength, at over 100 years of age. Upon being presented to the Emperor Augustus, who inquired the secret of his liveliness of spirits and strength of body at so great an age—he answered: "*Interius melle; exterius oleo*"—Internally through honey; externally through oil.

Pure honey should be used unsparingly by every family. It is no longer a luxury to be enjoyed only by few, but it is sufficiently cheap to be within the reach of all. It has properties which make it a valuable food. It differs from alcoholic stimulants, which dull the intellect—on the contrary it produces a bright intellect as well as a healthy body. Children are very fond of honey, and one pound of it goes further than a pound of butter. It has the peculiarity of keeping good, while butter often becomes rancid, and injurious to health.

The bees gather the honey from the juices of healthy plants, shrubs and trees, and the nectar so gathered is, therefore, the pure sweet, as it comes from the hand of the Creator. We therefore strongly advise every family in the land to place honey on the table for daily use; make cakes, cookies, ginger bread, pop-corn balls, etc., with it, and give it to the children, imparting to them health of body and strength of mind, instead of using the unhealthy, adulterated syrups which now so commonly deal out death to the "little ones," desolating almost every household and hanging the black pall of mourning over the world.

Feed no Glucose to Bees.—The Cincinnati *Grange Bulletin* in its last issue gives the following warning against feeding bees with glucose:

We have at all times condemned the use of glucose as a feed for bees, believing as we do, from a long experience, that its use is pernicious to the welfare of all bees that may be attempted to be wintered on it; hence we say do not try to feed your bees with the pernicious stuff (glucose).

Candy pulls are in fashion, but they are now called "glucose tennions."

Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

Wire Frame Holder.

We have received from E. H. Thurston, M. D., of Hagerstown, Ind., a very simple device for holding frames, which can be fastened to the side of the hive. It can be attached or detached in a moment, and will be found very convenient. It is placed in our museum, and the following description of it by Dr. Thurston is quite complete, and will give a good idea of it:

DEAR EDITOR—I send you, by mail, a wire frame holder. This arrangement is of my own getting up. While working with my bees, I often had to remove all the frames, and I was troubled to find places to put them, when I was looking for the queen. During one night I was wakeful and thinking of my bees, when the idea of a frame holder came to me; next morning I put my plans into execution and a wire holder something like the one I send you was the result. I tested it and on Tuesday I went to Cincinnati, Ohio, to attend the North American Bee-Keepers' Convention, and took my holder with me. It met the approval of Messrs. A. I. Root, I. R. Good and many others who examined it; all thought it good. On my return I improved it, as the one sent you to-day. The holder can be fastened to any hive. If there be no projection to fasten it to, you can screw two small blocks on the hive to receive the horizontal bars. This holder will hold 5 frames; they may be made to hold more. The cost of the holder will not be more than 10c; and any one can make them. I use two pieces of wire, 20 inches long, to make each bracket, and 2 pieces of wire 11 inches long to make the side hook braces. When the holder is put on and the sharp ends of the top bar pressed tightly into the wood and side hook bars well fastened you will find it will be very solid and will hold to its place. The holder might be made of wire about one or two sizes larger. There is no patent on it, nor shall there be. I wish to give a description of it in the JOURNAL so that every bee-keeper may have the advantage of it. Any one can make them, and I think all who use them will find them very convenient.

As the time for the usual winter rush of correspondence is nearing, let us try to impress on our correspondents the necessity of being careful when writing to this office. If they live near one postoffice and get their mail at another, be sure to give the address we have on our list.

The Detroit *Free Press* man must have been there. He says: "The sting of a bee is really only one-eighth of an inch long, imagination makes it seem as long as a hoe handle."—*Exchange*.

Bees still Working on Sweet Clover.

—Mr. Julius Tomlinson of Allegan, Mich., writes us under date of Oct. 6, 1882, as follows: "The weather here is very warm and has been very dry, but Thursday we had a fine rain. My bees are working on sweet clover now." Bees are still working on it in Chicago, and will do so, for many weeks to come, if it is warm enough for them to fly.

The California *Apiculturist* for September, referring to the remarks of the BEE JOURNAL concerning the uses of drones in the hive, and suggesting that they may nurse the young bees, increase the heat in the hive, etc., remarks as follows in a jocular way: "It is said by some naturalists that drone bees are a slandered race, that they are not idlers, but nurse and take care of the baby bees. Can as much be said of old bachelors?"

The Northwestern Bee-Keepers' Convention will be held at Chicago, on Wednesday and Thursday, Oct. 18 and 19, 1882. By a notice on page 650 it will be seen that Dr. Miller, the president, has discovered an error in the date previously announced. Let all take particular notice, and be prepared to attend and partake of the "feast of reason and flow of soul," there to be enjoyed. The place of rendezvous will be at the office of the AMERICAN BEE JOURNAL, where the hotel arrangements and place of meeting will be made known.

Wintering Bees.—As this subject is now a very seasonable one we present the Prize Essay on wintering bees, by Mr. Clouse, in this issue. In our next we expect to give an illustrated article by Mr. James Heddon on the same subject.

Just as we go to press, we are informed by the Secretary of the National Convention, Mr. A. I. Root, that he will furnish us the Official Report in time for the next number of the BEE JOURNAL.

Sample Copies of the AMERICAN BEE JOURNAL will be sent free to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.



Local Convention Directory.

1882. Time and Place of Meeting.

- 13—N. W. of LaCrosse, at LaCrosse, Wis.
G. J. Pammel, Sec., LaCrosse, Wis.
18, 19—Northwestern, at Chicago, Ill.
C. C. Coffinberry, Sec., Chicago, Ill.
18, 19—Southern California, at Los Angeles.
J. E. Pleasants, Pres., Anaheim, Cal.
21—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec., Norwalk, O.
Nov. 1—New Jersey & Eastern, at New Brunswick.
J. Hasbrouck, Sec., Bound Brook, N. J.
3.—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Ontario, Canada, Convention.

The Ontario Bee-Keepers' Association was held at Toronto on Sept. 13, 1882. Hon. Louis Wallbridge in the chair.

The Secretary's report was read and adopted. It showed 116 members, and balance in hand of Treasurer of \$27.25.

The President said that the committee, consisting of himself, the Secretary and Mr. D. A. Jones, had applied to the Government for incorporation and a money grant. The Government seemed favorable to an Act of incorporation, but hesitated on the point of a grant.

The President's address was then made, in which he said that he took a real pleasure in bee-keeping apart from the profit. The study of the habits and development of bees was most instructive and elevating. They were excellent instructors in mathematics, and set an excellent example in social economy. The honey display at the Exhibition this year was not quite up to the usual mark, owing to the very unfavorable season.

His method of wintering bees, he said, had been tested by him and found good. He used the Langstroth hive with nine frames. He never interfered with the brood nest in the spring, when he removed certain combs to insure breeding. He confined his honey raising operations to the filling of boxes; he did not remove frames. For wintering he removed all the boxes and honey boards, and stripped everything down to the comb-frames. With a coarse fabric he formed quilts and cushions, with which he carefully protected the hives. These he piled one above the other in his cellar, keeping them apart with small battens, and covering each separately with a piece of cloth so as to afford each colony space to walk up the sides of their own habitation. This separation secured proper ventilation and dryness, and was absolutely necessary in cellar wintering for the safe and healthy preservation of bees.

In reply to a question, he stated that he gave no top ventilation except through the quilt. The moisture passed through the quilt and

evaporated on the top. The great principle was to keep in the heat and let out the moisture.

D. A. Jones was of the opinion that the whole secret of wintering was to have plenty of young bees, plenty of stores, together with plenty of heat and ventilation. The great danger was the generation of carbonic acid gas. In one instance he had found a stratum of this gas in his cellar to the depth of six inches. As carbonic acid gas was heavier than the atmosphere, and consequently sunk, it was most important to elevate the hives a little and have proper bottom ventilation.

The President said that in his cellar the gas generated was carried away by a small stream of water. His hives were also raised slightly from the ground.

Mr. W. C. Wells explained how he had applied a stove to secure proper heat and ventilation. He let off the noxious gas through a tile, like water.

Dr. Shaver, of Stratford, thought the cushions or quilt should be filled with sawdust six inches deep. Proper ventilation would remove the carbonic acid gas. The opening of the doors and windows was sufficient. The colonies should be ventilated from either above or below. He agreed with the President about stacking the hives one above the other separated by small stakes. He never took out his bees until the first of May. Early moving in the spring caused the queen to begin laying before the weather was warm enough, and bad consequences were sure to follow.

Mr. Jones found by weighing that during winter his colonies consumed about five or six pounds of honey. Soft maple blossoms were of great value to bees in spring, perhaps about the 1st of April.

Thos. Forfar considered the bottom ventilation an absolute necessity, as the carbonic acid gas, being heavier than air, sunk to the bottom.

C. R. Trench, of New Market, was convinced that ventilation is required both at top and bottom. He had been very successful in wintering, and he adopted measures to secure this kind of ventilation. He considered dry sawdust packing of the greatest value both in summer and winter. In summer it kept out the heat, and in winter the cold. He considered feeding in the winter a very bad expedient. He did not think chaff as good as sawdust, especially on top, where it got all matted together. It might do at the sides. The sawdust packing prevented the deceitful warming up of a wintry sun, which sometimes lured bees outside to meet death from cold. He used sawdust to the depth of four inches and left his hives thus protected all winter. He had not been successful either in cellar or bee-house wintering, but had been quite successful when he left the hives on the summer stands.

Mr. McKnight said that it appeared that every one considered the way which he found successful, the right way. He proceeded to describe experiments he had made in bee-house,

cellar, and outside wintering. He had uniformly met with success by all methods, and therefore he concluded that there must be several right ways. He used different kinds of hives, but gave preference to the Thomas hive for wintering, owing to the depth of the frame. He had found for packing purposes ground cork better than sawdust, chaff, or any thing else. He thought a good transmitter rather than a good absorbent was what was required on the top of hives.

SECOND SESSION.

In the absence of the President, Mr. Corneli Lindsay was called to the chair.

Mr. Woodward asked what was the best method of introducing a new queen late in the season.

Mr. Corneli formed a cage of wire-cloth with an open side, which he placed on the combs. The queen, thus protected, took a deep draught of honey, and then set about her proper business. In a short time a young brood surrounded her, and she felt quite at home.

Mr. Jones took a piece of wire-cloth and formed it into a box without a lid. He cleared a piece of comb, placed the queen on it, and then covered her with the wire-cloth box. In a short time the bees gnawed through the comb and liberated the captive. The operation was then complete. He had also successfully introduced a queen with the assistance of chloroform. He believed the best way was to cage the queen on a comb. A gentleman of Cincinnati had successfully introduced queens by enclosing them first in a close wire-cloth cage and suspending it for a time in the hive. Subsequently he made an aperture at the bottom and covered it with wax. The bees then gnawed her out in a friendly way. It was a very unwise thing to disturb the hive after introducing the queen.

Mr. Chalmers wanted Mr. Jones to explain how he used chloroform. He thought it was another dangerous operation.

Mr. Jones said he confined his doctoring with chloroform entirely to his bees. After the application of chloroform the bees lay as if dead on the bottom of the hive, but when a little fresh air passed over them they revived. Care must be taken to give the whole hive a uniform dose. A sponge moistened with chloroform must not be introduced into the hive.

Mr. McKnight stated that his third gathering of honey had been very dark in color, resembling molasses. He had not discovered from what source the honey came. The flavor and consistency of it were satisfactory. The combs were also black.

Question. What can be done for a broken down colony of bees if discovered before the bees are smothered?

Mr. Jones explained that this occurred sometimes in shipping. He cooled the combs until they became stiff and then replaced them. The bees very soon repaired breaches.

Mr. Chalmers asked what could be done for bees smeared with honey.

Mr. Jones thought the best way was

to allow other bees to remove it. He would not wash them.

Mr. Forfar was of opinion that the best way was to wash off the honey with warm water.

Mr. McKnight said the bees shook their wings and used every effort to extricate themselves. If they could move round at all they would clean themselves.

Question. In moving bees for better pasturage how near may they be placed to their former position so that they will not return thither?

Mr. Corneil stated that he had moved some colonies three miles, and there had been no returning. He was, however, satisfied that he could move them a quarter of a mile without fear of their returning, provided he used precautions.

Mr. Jones had moved some of his a distance of less than two miles without any of them returning. If trees were present they could be removed a shorter distance. He did not believe in the practicability of moving them to different places in the same yard by setting up boards.

Mr. Corneil was of opinion that this could be done provided the bees were shaken up. The motion of a wagon would be sufficient.

Mr. Chalmers had found them to return two miles. This year he had moved a colony half a mile. He had shaken them up and set a board before them as a mark. Few returned.

Question. What are the advantages to be derived from reversible frames, and what is the simplest means of reversing them?

Mr. Rutherford, of Strathroy, said that by reversing the frames the combs were completed with feed and made perfect both above and below. When not reversed bees often left an open space below. By reversing, the four corners of the comb instead of two corners were filled with honey, and the center as usual with brood. He also described an improved form of feeder which he had invented. It enabled feeding to be regulated in speed and applied in any position.

Mr. Jones said he had tried most methods of bee feeding. During the last four years he had used about 120 barrels of sugar. In half an hour he had supplied as much as a thousand pounds by simply pouring the syrup upon the backboard of the hive. He fed at night and allowed them to consume it before morning. It was well to feed the whole yard at once to prevent robbing. He recommended nothing but the best sugar.

Mr. Corneil thought granulated or loaf sugar was better than crystalized sugar. In the former the water of crystallization was evaporated.

Mr. Rutherford preferred the Italians in some respects to the blacks. The Cyprians, according to his experience, were "terrors." Before handling them he required to smoke them above and below, and even then it was a hazardous matter to handle them. Last year his Cyprians had done admirably. This year they had also done well. He did not look upon his as pure Cyprians. He believed they were crossed with Italians.

Mr. Jones thought the Cyprians were too irritable, but when crossed with Italians they were excellent honey gatherers. He believed the Holy Land bees crossed with Italians were the best in his yard. He had had a sad experience with black bees. Six or seven of these colonies were starving, while the Cyprian and Holy Land bees were filling their hives with honey.

Mr. Woodward narrated a case of a queen that could not fly, being mated in her own hive, contrary to what was usually accepted as the rule.

Mr. Jones said this question had been discussed last year. No one at that time had been successful in obtaining fertilization in confinement. A committee, consisting of himself and Prof. Cook, of Michigan, had been appointed to make experiments. Prof. Cook had taken 5 young queens, cut their wings, and confined them by means of guards. Four of these never laid. One after fourteen days did lay, and the offspring was perfect. The queen of this hive had been examined, and was found incapable of flying. Prof. Cook came to the conclusion that she must have been mated in her own hive.

Mr. Corneil believed that dysentery was due to dampness of the atmosphere. Honey, he said, was a hydrocarbon, and when combined with oxygen water was formed. Comparative physiologists knew that honey in this condition produced dysentery among other bad results. The effect of damp weather on man was to prevent proper exhalation. Consequently the excreta that would have passed off by the skin was thrown into other channels and produced dysentery. It required dampness to produce fermentation, fermentation to produce bacteria, and bacteria to produce dysentery. The proper prevention was ventilation. When air was humid more ventilation was required than when the air was dry. Every 27° increase of temperature in the atmosphere doubled its capacity for absorbing moisture. He had made experiments to verify this. By making suitable arrangements of pipes in his cellar he entirely prevented dysentery among his bees. This was done by keeping the air dry and of proper temperature. He considered it as important to put a hygrometer as a thermometer in cellars, in order to test the humidity and temperature of the atmosphere. Experiments of a very careful character had been made in a hospital in Montreal to ascertain in what part of the rooms the air was purest and in what part foulest. These experiments showed that the purest air was in a layer on the floor and in a layer a little deeper close to the ceiling. The air midway between these layers was foulest. These experiments, the accuracy of which he did not doubt, exploded the old theory of the purest air being midway between the floor and the ceiling. Taking into consideration the law of the diffusion of gases, he could not see how a layer of carbonic acid gas could lie on the floor. If they enclosed two gases in any space both

would be found after a time equally distributed throughout it.

Mr. McKnight was elected President for the ensuing year; Dr. Shaver, First Vice President, and W. C. Wells Second Vice President; Secretary, Mr. R. F. Holterman; Executive Committee, Dr. Duncan, Messrs. J. B. Hall, Jones, Chalmers, Thorn, Ramer and Colcock.

The prize of \$10, given by Mr. Colcock, proprietor of the *Canadian Farmer*, for the best essay on "bee wintering" had been awarded to Mr. H. Clouse, Beeton, and is as follows:

WINTERING BEES.

Preparations for winter should be commenced about September 1, when it is both necessary and desirable that all weak colonies should be doubled up and strengthened; care being taken that all are supplied with good laying queens of not more than three years of age—of course, younger queens, all other points being equal, are preferable. The colonies must be kept breeding as long as possible, in order that there may be a sufficiency of young bees with which to go into winter quarters.

If there is not sufficient honey in the hive to promote breeding, and the bees are not gathering, they should be fed once a day—in the evening when they are less apt to rob. To make the feed or syrup, take standard granulated sugar and water, in the proportion of two pounds of the former, to one pound of the latter; bring to a boil, and allow to cool, then feed.

Rather the best vessel, in my experience, is a common coffee-pot, with a lip-spout, and the most expeditious as well as the simplest mode of feeding, is to raise the entrance end of the hive about one inch above the level; lift the cover and displace a corner of the bee-quilt, pouring in the syrup in quantities of a tea-cupful or less, according to the strength of the colony. On this point considerable care should be exercised as in the case of weak colonies, where they are unable to take up before morning the quantity given them, there is a chance that the other and stronger colonies may begin robbing.

I would advance as another reason for feeding in the evening, that, should there be a chance of their gathering natural stores the following day, their hives would be clear and nothing need then prevent them from going to work, whereas, were they fed in the morning they would remain at work in the hive and would lose what natural stores they might otherwise have gathered. By this method the hives would of a necessity require tight bottom-boards, thus preventing the feed from running out, where bottoms are not so arranged, other means would have to be adopted—such as the use of the different feeders, etc., which are in existence. This, however, is by far the cheapest, simplest and quickest mode of feeding, as by proper management, one person can (with the assistance of a small boy to take off covers, etc.), feed from 200 to 300 colonies per hour.

This feeding should be continued until about the first of October, but

about the 15th of September, all colonies should be crowded to as small a space as possible (by the use of division boards), so that when clustered the bees will cover from 5 to 10 frames, according to their respective strengths, selecting always the oldest combs (as they retain the heat better) and those best filled with sealed and other honey and also containing a good supply of pollen, which latter will generally be found at either side of the brood-chamber, and more especially toward the entrance of the hive, taking care to place the combs containing the pollen in about the same position for winter, because in cold weather they are very apt to become chilled (if they have to go around the comb for food) before they can reach the cluster again.

If the bees are to be wintered in chaff or sawdust hives, the space behind the division board should be filled with sawdust, chaff, dry leaves or some other absorbent material—the former is preferable as the same thickness of it as of the others will keep the bees in a much better condition, besides being more easily obtained. Before filling in space behind the division board the colony should be examined to ascertain that they are all supplied with queens, and that there is enough space in the lower part of the combs, free from honey on which to cluster as it is not desirable that they should cluster on the honey since the heat is not so easily retained as by the empty combs. At this time any unsealed honey should be extracted, it becoming sour when left standing, and being apt to cause dysentery, care being taken to avoid breaking of the capping. After this has been done and the frames replaced, fasten the division boards securely; then pack and place over the top of frames, first, a bee-quilt which is free from propolis, and then the cushion or packing to absorb the moisture. By placing bee-quilt between frames and cushion you prevent the latter from receiving any propolis, or from being gnawed by the bees, thus enabling you to use the same cushion for years.

If the bees are to be packed in clamps they should be moved each day that they have been flying, from six to twelve inches until you have them in the place designed for them, which place should be sheltered from the north and west winds. Place the hives about 6 or 8 inches apart, with the entrances facing south and east—the former preferred. Then they should be raised up a foot from the ground to allow space for packing beneath, leaving the entrance of hive about one inch below the level to allow any water which might perchance have found its way into the hive, to escape. A channel should be formed the same height and breadth as entrance to hive, and long enough to appear through the packing in front, thus allowing the bees a passage from the outside. Before forming channel the hives should be examined and prepared in the same manner as are the sawdust or chaff hives, also packing behind the division board and using fresh quilt. Boxing should then be

constructed, sufficiently large to allow a space for packing of about 12 inches at backs of hive and ends of clamp, and 6 inches in the front. Some have wintered successfully with less. Proceed with the packing towards evening when the bees are not flying, as if done while they are, they will experience more difficulty in finding entrance, whereas when flying out after packing is completed, they will mark the location and have no trouble on their return. The channels must be securely fastened so they will not be easily displaced by the settling of packing or any other reason.

When filling, stamp in the packing until the top of the hive is reached; then remove the lid and cover the frames with sawdust to the depth of one foot. Cover the whole securely so that neither rain nor snow may penetrate. They will then require no attention until the first fine day during the approach of spring, while the bees are out for a fly, when the hive should be examined—the object being to see that they have sufficient food; if not they should be given a frame of sealed honey, or a cake of sugar or candy, placed over the frames, as at this time it would be too early to feed liquids. The candy is made by the same process as syrup, with the exception that the amount of water is diminished. In some cases bees have been fed during the entire winter on this candy and have thrived well; when placed on frames in the fall it is made in cakes six or eight inches square, and about 2 inches thick, while for spring feeding it need only be about 1 inch thick.

When bees are to be wintered in the bee house they should be prepared by the same process as in out-door wintering, and at about the same time, using the same precautions; they will not then require any more care until the time for removal to their winter quarters, which is generally from the first to the middle of November—in other words just before winter sets in. If, after they have had a good fly, and return with empty stomachs, the following day is cool, and if you are of the opinion that fine weather is past, they should then be housed. First close the entrance by adjusting blocks and slides for that purpose; then remove the cover and place on top of bee-quilt a cushion which may be made to cover the entire top of hive, and about four inches deep of dry sawdust packing.

You will then carry the hives in carefully, so that the bees may not be jarred or the comb misplaced. If the bee house is not supplied with shelves, place a platform all around, 6 inches from the floor, and the width of the hives. On this place a row of hives, with the entrances toward the centre of the room, and 2 inches between the hives. On narrow strips at each end of the hives, place another row, with the entrances over the space between the hives of the first row. Then place more strips and hives until all are in position, the strongest colonies at the bottom and the weakest at the top, to give the latter the benefit of the heat from those at the bottom. The upper rows should be not less than 6 inches

from the ceiling. If crowded for room two rows may be placed in the centre of the building, which should have double walls, with a space of 18 inches packed with dry sawdust, with the same thickness overhead. A pipe, 6 in. square inside, should pass from the centre of the ceiling of the house up through the roof; the full length of the pipe being about 10 feet.

The foundation must be frost-proof, and there should be an underground ventilator of about the same size as the upper one, running from the center of the floor, and having its outward mouth from 100 to 200 feet from the building, at a depth to which frost could not penetrate. By this means the temperature inside is not so liable to sudden changes. It should be kept between 40 and 45° during winter, with as little variation as possible. If it falls, the upper ventilator should be closed for a short time. This may be effected by means of a slide, either at the ceiling or in the garret.

In case the temperature is above the regulation, which often occurs near spring, the doors should be opened at nights; or ice should be placed in a position near the ceiling, with a vessel below to catch the drip, so that moisture may not be created. Entrances must all be removed after bees have been placed in winter quarters, and bees must be kept quiet and unexposed to the light. Excitement, light and uneven temperature will cause them to gorge themselves with honey, after which, being unable to have a cleansing flight, they may become affected with dysentery, which will soon be made manifest, by their soiling the entrance of hive. Immediately this is noticeable, they should be given a fly (when temperature is not below 45°), excepting in cases where the bees have been given a flight before the spring. It is not necessary to have them placed on their old stands, as after having remained in winter quarters for four or five months, they will have forgotten their former localities.

In putting the bees out in spring, some promising fine day should be chosen, when temperature is above 45° in the shade. Place them out in the forenoon so that they may have a good flight—covers to be placed on at once. Every entrance should be closed before commencing to carry out the bees, and may be slightly opened after being placed on the stands.

When inside wintering is adopted, a lamp might be introduced with which to examine hives, and care should be taken to scrape the dead bees, etc., from the entrances two or three times during winter, without disturbing the other bees. Be particular that entrances to hives packed outside do not get clogged up with dead bees, ice or snow—to prevent the latter, clamp roof should slant toward back of hives.

The method of wintering in bee house may also apply to cellar wintering. Believing that numbers of beekeepers may have to resort to feeding this season, I have particularized that part of my subject more than I might otherwise have done. Fulfill these conditions and be assured of success.

THE NATIONAL CONVENTION.

As our representative was unable to attend the National Convention and take a report of the discussions, as we intended, we must defer their publication until the official report is received from the secretary. We are informed that about 100 bee-keepers were there and that the meeting was interesting and harmonious. It was decided to hold the next annual session in Toronto, Canada. The following were elected as the officers for the ensuing year:

President—D. A. Jones, Beeton, Ont.
Secretary—A. I. Root, Medina, O.
Treas.—C. F. Muth, Cincinnati, O.

Vice Presidents:—W. S. Hart, New Smyrna, Florida. Dr. J. P. H. Brown, Augusta, Ga. Dr. C. C. Miller, Marengo, Ill. J. M. Hicks, Battle Ground, Ind. O. O. Poppleton, Williamstown, Iowa. Rev. L. Johnson, Walton, Ky. L. Sartoris, Maryland. J. T. Davis, Shelburn Falls, Mass. Prof. A. J. Cook, Lansing, Michigan. Dr. O. M. Blanton, Greenville, Miss. E. M. Hayhurst, Kansas City, Mo. G. M. Doolittle, Borodino, N. Y. Dr. H. Bessie, Delaware, O. H. Hammond, S. C. J. W. Wilson, Tenn. Bowers, Va. C. Grimm, Jefferson, Wis.

Mr. C. F. Muth gave the following address on "Our Honey Market:"

Every producer soon learns to appreciate a rise in the market, or an increase in the demand of his produce, and it appears to me that no class of producers deserves more this happy change in the rise of the honey market than the bee-keeper, after, comparatively, short crops for the last four years, in most parts of this country. Of a modest and industrious disposition, he has put in hard work, under adverse circumstances, with an energy and steadiness which should be crowned with success.

It is 12 or 15 years ago, when, principally by the aid of Mr. Langstroth, we commenced to comprehend the movable-frame system. The honey extractor came next, and the introduction of comb foundation followed it. All these improvements were taken up with a keen eye, and made use of without regard to labor and expense, especially so by our American brethren. The result was an overstocking of the market. There was an abundance of extracted honey, far in excess of the demand. Low prices had to be accepted in order to effect sales.

Some of our zealous brethren expected that the natural laws could be suspended in favor of honey. They formed combinations and adopted resolutions that no honey should be sold for less than a certain price, that all middle men or dealers, should be excluded, that the producer should sell direct to the consumer; these and a number of other nonsensical resolutions were passed. One of those combinations offered the sale of their honey to me, if I would refuse to handle the honey of all other parties and associations. I admired their

patriotism and liberality, but left them alone.

The combinations and so-called co-operative arrangements of the present day are only feeble remnants of institutions which never benefitted anybody in particular and which will soon be wiped out of existence by that natural friend of the producer, the best and only co-operator in existence—"demand."

When we first commenced to astonish the world with our immense yields of honey, in the course of a few weeks, from one source alone (i.e. from white clover or linden) 200 lbs. of honey or more per colony, we were looked upon with suspicion. We learned to keep separate the honey of plants blooming at different times, producing thereby the choicest qualities possible. This by no means, weakened the suspicion resting upon us. The baker for instance or any other manufacturer would not believe that this fine flavored article of a beautiful golden color was clover honey. We had to take it back and bring him buckwheat or some other common quality with which his taste was familiar. Even some of our best druggists, well versed in other matters, looked incredulously at our best honey because they were not used to so fine a flavor.

All these matters have changed. There is perhaps not now a respectable merchant or manufacturer in Cincinnati who suspects our machine-extracted honey, and there is hardly a store to be found which does not keep it, nor a manufacturer using sweets at all, who does not use honey. There is perhaps no city in America where more extracted honey is retailed than in Cincinnati, nor where there is more honey used for manufacturing purposes. Sweet honey is even used for making sour pickles. Being a Cincinnati, I can best speak of Cincinnati and if I am found to be exaggerating in any particular, I am willing to stand corrected. The growth of the demand for honey (I mean for extracted honey), is very encouraging. It is growing gradually and steadily. Its growth is a healthy one and will continue as long as consumers and manufacturers keep faith in the producer and dealer supplying them. If it was not for a few wicked adulterators the consumption of honey in this country would be immense by this time. However, there is no occupation without an unpleasant feature, and as bee-keepers we should ask no exception to this rule. But I feel safe in saying, that no overstocking of the market will take place any more, and the great and growing demand, at present, warrants that hereafter supply only will determine prices of extracted honey, like the rest of our great staples.

Time has brought on a great change even with the name of honey itself. Comb honey used to be the honey, and with a few old fogies that is still the honey, but it must be of a choice quality to find a ready sale and if it is a little unhandy to get it, or if the price is a little too high, it is a fact that parties do very readily without it. If comb honey is nice and cheap,

a good deal can be sold, but it will remain a fancy article only, and the demand for it will never grow.

President Cook's Address.

Ladies and Gentlemen of the National Bee-Keepers' Association, and Friends:—It is fortunate for me that bee-keepers are of a practical turn, and so are always better pleased with facts and matters of interest than with mere eloquence. Thus in calling attention to what immediately concerns us as apiculturists, I can hardly fail to secure your interest and attention.

Since our last meeting, we have had to mourn the loss of one of the most noted bee-keepers of our country. A. F. Moon was the one to inaugurate a movement that resulted in the establishment of the Michigan Bee-Keepers' Association. He was the first, also, to move publicly towards the founding of this Association. As a writer of articles to the bee papers, and as the editor of a successful journal for years, he is well known to all of you. As a bee-keeper, he was very enterprising, and gave to the craft many valuable improvements, both in the way of apparatus and methods of manipulation. In the apiary, Mr. Moon was peculiarly at home. Few men in the world could surpass him in the skill and rapidity with which he manipulated bees. As Secretary of the Michigan Association, when Mr. Moon was President, I early learned to appreciate his energy, enterprise and ability as a bee-keeper. Mr. Moon never tired in the work of aiding and advising those who were learners in the art to the prosecution of which he gave his best work. To-day we all mourn the loss of one whose work will long endure in the more intelligent labors of those left behind.

The last year has been one that has generally given joy and hope to the apiarist. In some localities in the north, and in Canada, the cold season has frozen up the nectar glands of the flowers, and the bees have merely gathered enough to support them. We thus learn that cold no less than severe drouth and wet, will destroy the yield of honey.

The present season has emphasised the importance of a varied pasturage for bees. Some of us who got no clover honey and very little basswood, are rejoicing in a full crop of fall honey. Surely, we as bee-keepers can do no wiser thing than to study to increase the number, variety and excellence of our honey plants.

Another lesson of the season, is the value that may come from moving bees to the vicinity of bloom. Mr. George Grimm thinks this so important, that he makes his hives so as to the better practice it. I know of bee-keepers that got all the sections full of fine honey this past summer, simply by spending one day in moving their bees, while their neighbors, who practiced the usual method of remaining at home, got almost no honey, and are now feeding for winter.

Another point that we do well to consider, is the quality of our bees. Mr. Jones finds that while his black bees have gathered none, and would

have starved had he not fed them, his Syrians have laid by considerable surplus. This Association can do no wiser thing than to encourage, in every possible way, the improvement of our strains of bees.

Owing largely to the stimulus given by your action last year, the exhibitions at our annual fairs have been better, more general, and better rewarded than ever before. Let us continue to urge separate buildings for the exhibition of bees, honey, etc., larger premiums, and then work to make them in the best degree successful.

Your committee on fertilization in confinement have all been at work to succeed in this important but difficult matter, yet in every case, if we except Prof. Hasbrouck, without any signal success. I have succeeded in having one queen mated in the hive, as she was clipped as soon as she left the cell, and there was perforated zinc at the entrance all the time, and upon trial we found that the queen could not crowd her thorax through the openings. She positively could not have been mated on the wing, as she never could fly. It seems as certain that she could never have been fertilized outside the hive. Several other experiments have all failed. Surely this matter is too important to be abandoned till we gain a method, if it is possible (and there is great reason to hope), that shall succeed in the hands of all.

During the year our attention has been called to several matters that are well worthy of mention here. The value of the perforated zinc in the apiary is assured. The desirability of an inclosure of wire gauze, and cloth to surround us and the bees as we are called to work with them when they are not gathering, is also established. This not only prevents the robbing mania, but we find that even Syrian hybrids will not sting in such a tent. We value ours very highly. Perhaps the greatest discovery that has been given widely to the public is the method discovered by I. R. Good, of Nappanee, Ind., to prepare food to be used in shipping queens. It is simply granulated sugar, moistened with honey just so the latter will not run, and yet so as to keep the sugar moist, and do away with the need of water in the shipping cages. Experience seems to have proven the value of this food beyond question. Is it not possible that this may give a hint to a first class food for winter?

With these preliminary remarks, I will conclude this address with the details of some investigations which I have made to determine the nature of the so called "dry feces."

[The investigations will be found in the BEE JOURNAL of last week, page 626.—ED.]

Mr. C. F. Muth gave the following address on "Foul Brood."

Foul brood among bees, as the name denotes, is a disease of the bee while in the larva state. It does not effect the bee after it has attained its growth. The disease originates, in this coun-

try, from infection only, and spreads rapidly because of its very insidious character. Brood may die in the hives from chilling, smothering, starving, or other cause, decay and create an unbearable stench at a time when colonies are too weak to remove the dead bodies. It will never create the disease "Foul Brood." We may hang these combs containing decaying larvæ in strong colonies, where they will be "cleaned out" without the least bad result.

Among the hives of my country apiary I found, about the middle of last August, 2 colonies with fertile workers, which I broke up by removing the hives and giving the brood combs to a young swarm a short distance off. I went out to the farm again about 4 weeks afterward, accompanied by a bee-keeping friend. While I was otherwise engaged, my friend, who is a good bee-keeper, overhauled a number of colonies and found one with "foul brood." He had seen the disease at my home apiary, and knows chilled brood as well as any of us.

In this case, however, I doubted my friend's judgment. Not having salicylic acid at hand, we got brimstone ready and deferred looking at the colony until evening, after we had finished the balance of the bees. I was surprised at the sight; about 4 weeks previous I had put 6 combs full of drone and worker brood, from fertile colonies into the second story of this rather weak one, with all the bees adhering to the combs, and shaking all the bees of both hives in front of this one. The bees had all left to join their old hives; the brood was exposed thereby, and all had died.

It bore a striking resemblance to "foul brood," but the brood, although in an advanced state of decomposition, pulled out whole from every cell with the head of a pin. This is hardly ever the case with foul brood, where the skin appears to decay at the same time with the body, and the dead larvæ appears to be only a soft mass without any cohesion. In order to convince my doubting friend, I placed the combs in second stories of strong colonies, and buried only the most offensive ones. I am certain I made no mistake in the matter, and mention the above in order to bring more light on the subject of "foul brood," and to contradict and put on their guard those of our friends who still claim that chilling creates "foul brood," or that a good or bad season has something to do with it.

So many sample combs infected with the disease, sent me for examination last summer from different parts of the country, convinces me that the knowledge of foul brood is one of the most important subjects to bee-keepers. Many are aware that my home apiary has been troubled more or less with foul brood for a number of years. I never made it a secret, but showed the disease to every visiting friend for his own information, whenever it was in my power. Foul brood never made any headway with me, and, in no case, was it spread by me, although I sold hundreds of colo-

nies of bees, and a large number of queens. My apiary was free from the disease sometimes, for a year or more, with no sign of foul brood anywhere until the following fall or spring, I would discover again a cell of foul brood, or a number of them in one or more hives. Whenever I noticed those diseased cells in time, before they had thrown out their infectious spores, I made them harmless by means of an atomizer, and succeeded in the majority of cases. The hives with which I failed kept me in "hot water" for months, and sometimes for all summer, and then, when "patience had ceased to be a virtue," they were subjected to the radical cure as given in my pamphlet, "Practical Hints to Bee-Keepers."

It was a mystery to me what caused the occasional re-appearance of foul brood in my apiary. I know that spores of the disease may be hid for years in crevices in or about the hives, that a diseased larvæ pulled out and dropped anywhere may infect a bee accidentally alighting on it, but I was so particular to remove all such causes, aided by the peculiar location of my apiary, that I could not believe a friend correct, when he claimed that I infected my bees by the use of salicylic acid.

Light was thrown on the subject last spring and summer. A party about a mile from my house (bee line perhaps $\frac{1}{2}$ mile) kept 12 colonies or more of bees for several years, and lost the last one last spring. I was well acquainted with him, but his black bees and old foggy style of keeping them had never excited my curiosity. He came to me about the latter part of May and related that he had kept bees now for 10 years, that he got less bees every year, and that the last colony had died this spring, that a lively robbing had taken place when his last colony fizzled out, and that the robbers were my yellow bees; "and now," he concluded, "can't you buy my hives and combs," etc. I went out and found him in possession of about 600 combs; every one of his colonies had died of foul brood. The combs showed it satisfactorily, and my bees, no doubt, had "saved the pieces," whenever any one of the colonies had given out.

Three of my colonies apparently, had been participating in the last feast, during the beginning of that beautiful spell of pleasant weather in March. Two of them were put on foundation, and were cured in the same month, while the bees of the third were sold to a druggist (for medicine), and the combs burned. I did not know the source of my trouble until my neighbor saw me in the latter part of May.

If I here give my experience in detail, it is done because I think that in this manner it is more likely to "stick" with the majority of bee-keepers. I purchased the hives referred to above, with the proviso that they be scraped off nicely, and the combs and frames burned before the hives were delivered. This was done. The hives were placed against a dark wall in my stable, until I should have

time to disinfect them. No flowers were then (about June 1) yielding honey, and bees went anywhere to find sweets, in this neighborhood. A lot of honey was lying in the stable, and several barrels were leaking, and when I came into the stable one day I was surprised at the number of bees rising from the floor, alighting and resting on those bee hives and then making for some small windows under the ceiling. The thought struck me at once that the bees alighting on those hives would take home with them the spores of foul brood. I proceeded at once to disinfect those hives by cleaning them out and moistening every part thereof with the medicine by the means of paint brushes. It was, however, too late. Of my 36 colonies of Italians bees, only 5 or 6 were not infected, and these now remain uninfected. The mischief just being done and finding only a few, say from 1 to about 10 or 12 infected cells in a hive, I expected to cure the most, if not all, by a few good attempts at atomizing, and I succeeded with 7 or 8 colonies. I examined all the hives at least once or twice a week thoroughly, and when September commenced, and I still found from 1 to 4 cells diseased in every one of the balance, my patience was exhausted, and I immediately proceeded to the radical cure, I shall describe further on, what should have been adopted at once, and which is the only complete cure for foul brood known to me.

It was no small job, and I had accomplished but little; about 4 gallons of water was mixed with 10 gallons of honey and a lot of quart Mason's jars filled therewith; to every jar was added an ounce of foul brood medicine thoroughly mixed and a perforated cover put on. I use the Langstroth 10-frame hive. The first infected hive was put to one side and replaced by the lower story of another clean hive, provided with 10 sheets of foundation, covered, and a jar of medicated honey, inverted over a hole above it; a platform was now placed against the alighting board, and the bees of every comb of the infected hive were brushed on the same and made to enter together with all the rest. It will not take them long to empty these jars, which should be replaced by full ones as soon as empty until all the foundations are built out, and the bees have honey enough to winter on. The old combs can be extracted and rendered into wax, but great care should be taken that no bee alights on them nor on anything else pertaining to an infected hive.

It is stated by good authority that the spores of foul brood are made harmless through the boiling process, but I bury the remnants of combs, and render wax at night so that bees are excluded entirely. The hives and frames are disinfected thoroughly by means of a good atomizer, or the medicine is applied by a paint brush, not a part must be missed. After the first hive is disinfected, as described, it answers the purpose of a new one, and can be used for the next infected colony which is subjected to the same treatment as the first, and so on. My

atomizer is always ready, filled with the medicine, and my fingers and knife are disinfected at intervals, and when I leave an infected colony. This cure is complete and has been tried by me, perhaps a hundred times or more. No combs from an infected colony should be used again in a healthy one, because one of those spores smaller than a speck of dust, invisible to the naked eye, attached to the comb, is sure to breed mischief.

My foul brood medicine is the same as given at our last meeting and in "Practical Hints." It will do no harm to repeat it. The following is the formula: 16 grains salicylic acid, 16 grains soda borax, and 1 ounce of water. It is cheap, can be put up by every druggist, and every bee-keeper should have a bottle of it ready for an emergency.

As time is money in this country of ours, it may be best and cheapest for us to apply brimstone to every colony affected with foul brood. This, however, should be done at night, when all the bees are at home. The hive should be closed below, at the entrance, with a pan of brimstone ignited, on the top of the frames, and a tight cover placed over the whole. The fumes of sulphur being heavier than the air, descend, and kill most effectually all life inside of the bee hive. Bury or burn all its contents, and be sure to disinfect the hive before you leave it.

Too Late.—I wish to express my regret that the call made by Prof. Cook, requesting that the different foundation machines be at the National Convention, reached me too late. The arrival of the BEE JOURNAL to-day was the first knowledge of it I had. It would have been impossible for me to attend in person, but would gladly have sent a man with a press if I had known in time that other machines were expected there.

D. S. GIVEN.

Los Angeles, Cal., Sept. 29, 1882.

The Iowa Central Bee-Keepers' Association will hold its annual meeting at the office of Graham & Steel, Winterset, Iowa, on Friday Nov. 3, 1882, at 10 a. m. All interested in bee culture are invited.

HENRY WALLACE.

The fifth annual meeting of the Northern Michigan Bee-Keepers' Convention will be held at Pewamo, Ionia County, Mich., on the second Tuesday and Wednesday (10th and 11th) of October, 1882. Pewamo being on the D. & M. and H. & M. R. R., it will be accessible by rail. The members will do all in their power to make the meeting interesting.

H. M. ROOP, Pres.

O. R. GOODNO, Sec.

The N. W. Bee-Keepers' Association of La Crosse, will meet in the City Hall in La Crosse on Friday, Oct. 13, 1882. All interested are invited to be present.

G. J. PAMMEL, Sec.

The Northwestern Bee-Keepers' Convention will meet at Chicago, Ill., on Wednesday and Thursday, Oct. 18 and 19, 1882. The office of the American Bee Journal has been kindly tendered as a place of meeting. A cordial invitation is extended to all bee-keepers, and especially those of the Northwestern States, to be present. The meeting takes place during the last week of the Inter-State Industrial Exposition, to enable all to obtain reduced railroad rates. First session at 10 a. m.

C. C. MILLER, Pres.

C. C. COFFINBERRY, Sec.

The Union Bee-Keepers' Association of Maryland, Virginia and West Virginia, will meet at Hagerstown, in the room of the County Commissioners, at the Court House, on Wednesday, Oct. 18, 1882, at 1 o'clock, p. m., the session to last two days. The Washington County Fair will then be in progress, which will give persons an opportunity to attend the exhibition. All persons intending to go will please drop me a card, so that I may secure for them half-fare rates.

J. LUTHER BOWERS, Sec.

The fall meeting of the Northern Ohio Bee-Keepers' Association will be held in Whittlesey Hall, Norwalk, O., Saturday, Oct. 21, commencing at 9 a. m. A full attendance is solicited, as it will be a meeting of more than usual interest. Principal subject for discussion: "How shall we winter our bees without loss?"

S. F. NEWMAN, Sec.

The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning County, in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th.

LEONIDAS CARSON, Pres.

The Southern California District Bee-Keepers' Association will hold their annual Convention in Union Hall, Los Angeles City, Oct. 19, 20, 1882, during the week of the Agricultural Fair. The Convention promises to be of so much interest that no bee-keeper should miss it. Ladies are pressing invited to attend.

J. E. PLEASANTS, Pres.

The Tuscarawas Valley Bee-Keepers' Association will hold their next meeting in Wilgus Hall, Newcomerstown, O., on Tuesday, Oct. 10, instead of Oct. 5th. This change is made in order to allow members to visit the National Convention at Cincinnati.

J. A. BUCKLEW, Sec.

CORRESPONDENCE

For the American Bee Journal.

Apiarian Salmagundi.

A. B. McLAVY.

Complying with Mr. Todd's request, I will say that in the early spring I frequently find scorpions in my hives over the mats. I have seen them of almost all ages, to judge by their size. I think their business end, or tail, is either born with them, or develops very soon after birth, for I have never seen one too young to have it appended. I suppose they seek the warmth above the cluster, as I have never been able to see any other object they sought.

Let me add a mite to the drone subject, seemingly in conflict with the generally accepted version of their usefulness, except for fecundating queens. Early in August I observed in all of my large colonies a great quantity of drone brood, often in the 1st and 2d stories. In the present month the drones seemed to me to be in the majority over the workers, but at the same time the combs were full of worker brood, and the drones were clustered thick over the brood. At this writing the colonies are full of workers, and they are killing off the drones, and that, too, when the honey flow from fall flowers is as fine as it can be. My bees are storing more honey now than in the spring.

Now, does not this argue some other use for drones? There are no cells, as in swarming season; the honey flow is fine and promises to be excellent, yet in the face of the glowing prospects, the poor drones seemingly having served their purpose, are being sacrificed.

I cannot fully accept the commonly-taught adaptation of the drones, and nothing more. The view I take is, that the prospects being bright, the bees bred the drones so as to take advantage of their corpulency (animal heat) in breeding up; that being accomplished, they are useless now, as an examination of my colonies will show, for they are "busters."

What is the future of wax? Without an idea either to "bull" or "bear" the price of wax, I make this inquiry. To my mind, the price of wax now is too low, and for the same reason that applies to any other commodity—the same inexorable law of supply and demand. The same remark applies to any one else that it does to myself. I use ten pounds and produce two. As a support to my position, I am informed that in Mexico the demand exceeds the supply, and that, too, when 60 cents is paid for it.

I think a remedy can be found by some enterprising Yankee bee-keeper, and I suggest it. It occurs to me that paper can be rolled out upon foundation rollers, the paper being wetted and the rollers heated, leaving the side walls on the paper. Now dip the

paper in a hot bath of wax, so as to give us the foundation both stronger and lighter, and using perhaps 60 or 75 per cent. less wax than at present. This has reference to foundation for extracting only. If this is worth anything, I cheerfully offer it to the fraternity.

Your appended remarks upon a clipping in No. 37, do not present the facts fairly regarding negroes as bee-keepers. While but few of them are progressive bee-keepers, yet when they are property-holders, they are very apt to keep bees. I think that probably 150 or 200 colonies of bees in this country are owned by negroes, and I find quite a number of them are valuable assistants at swarming time, and at other times, too. "Don't you forget it," they keep bees; they get the honey; they get stung, but they keep them "alle samee." My man Jerry handles a swarm just as well as any one.

Bastrop, Tex., Sept. 25, 1882.

For the American Bee Journal.

Poisonous Gases around Bee Hives.

R. F. HOLTERMAN.

Upon my return from the Toronto Industrial Exhibition, I find the BEE JOURNAL with an article on page 582, by Mr. Ed. Moore, in which he expresses a desire that some scientist enlighten him. Now I have no pretensions to so elevated a position, but I believe that I can throw a little light on the matter.

The freely circulating atmosphere has no such impure atmosphere next to the earth, provision for this has been made in the following manner: The animal world takes in oxygen and gives out water and carbonic acid gas, and to prevent too much of this being generated, it is taking up water, lime, and other substances; the plant life takes it up through these and other mediums, and gives off more or less pure oxygen. In this way the animal and plant kingdoms balance one another.

In the Valley of Death, in Java, where carbonic acid gas exudes from the caves in the earth, and the atmosphere is this gas in almost a pure state, no animal life exists, and on the other hand plant life is luxuriant. Scientists ascribe the great growth of vegetation (shown by coal-beds and other traces) in antediluvian times to the predominance of the carbonic acid gas. Then the winds and radiation from the earth's surface through the rising and setting of the sun, keeps the atmosphere in motion, thus keeping the gases of different weights constantly mixed. If it were not for this, the fish and all animal life would perish in the sea for want of oxygen, and cities would be visited by pestilence, but the gentle motion of the atmosphere, assisted by rain and windstorms keeps the whole in circulation.

I have tried different elevations for bee-hives, and prefer about three inches, with a board slanting from the entrance to the ground. If lower, the bottom board is too damp, causing bees to draw upon the combs more

easily; if higher, when loaded with honey they often drop to the ground before reaching the hive, especially in the spring of the year when cold. They are less exposed nearer the ground. They are better higher up as regards toads, but I have never found these latter very destructive.

Fisherville, Ont., Sept. 21, 1882.

For the American Bee Journal.

Glucose Detective.

T. MAHER.

Allow me to correct a little the account of our trials at your office last week, by chloride of barium, to detect free sulphuric acid in the glucose used for mixing with sugar, syrups and honey.

The first experiment was upon a so-called pure article of "golden syrup," about one ounce of which was poured in a glass to which was added about 2 ounces of water, this was thoroughly mixed by stirring till a very clear solution was obtained; after it had rested awhile, a few drops of the chloride solution were added carefully; a small white cloud of sulphate of baryta immediately appeared, showing the presence of not a very large percentage of free sulphuric acid, but of a sufficient quantity to form a light deposit, after a few hours, of this sulphate of baryta.

Test No. 2 consisted of a very small quantity, about half a small teaspoonful of Davenport "grape sugar," scraped with a pocket knife from a sample lump as large as an English walnut; this small quantity was also dissolved by carefully stirring it in 4 or 5 ounces of water, till another clear solution was obtained; it was also rested awhile, after which a few more drops of the chloride were added, when another cloud appeared thicker this time than on the first trial, which, as you say, did produce, after a few hours, a perceptible precipitate, not, however, of insoluble glucose, but of sulphate of baryta.

As for test No. 3 of the carefully corked sample phial of honey sent to you about two years ago, and which showed some thick fluid above the granulated portion in the bottom, the clear solution of it in the glass did not show any cloud on the addition of the few drops of chloride, hence no precipitate did take place, there being no free sulphuric acid in it to decompose the soluble chloride into an insoluble sulphate.

Let me add that any one can purchase for a dime or a nickel, an ounce of chloride of barium in crystal from a respectable drug store, dissolve it in a tumbler in 6 ounces of pure water, stirring with a teaspoon till a clear solution is obtained, after which it should be set by to settle well in a small bottle for about 12 hours; some light earthy sediment may then appear in the bottom of the bottle, from which the clear solution above it may be separated by pouring it carefully into another clear bottle, to be thus kept for use, carefully corked.

Chicago, Sept. 29, 1882.

For the American Bee Journal.

Some Hints about Conventions.

C. C. MILLER.

Perhaps I ought to say "two hints" as that number comes prominently before my mind just now.

The first is that each member should before he leaves home, write down a list of the subjects he wants discussed and the questions he wants answered.

The second is that he should take his wife with him, or other members of his family.

The experience of the past meetings of the Northwestern Convention at Chicago confirms the opinion that in no way can a meeting of bee-keepers be made more interesting and profitable than by having the time mostly or wholly spent in live discussions of practical topics, and in asking and answering questions such as are constantly arising in the minds of those who make their living through the labors of the busy bee.

Do not most bee-keepers' wives have some interest in their husbands' calling? Would they not be interested in hearing and taking part in bee-keepers' discussions? I am much mistaken in my estimate of bee-keepers' wives if they are not, in the main, an intelligent set, possessing an unusual amount of good, practical common sense; women who do their full share of the work and to whom a couple of days rest would be a blessing and whose presence at a convention would largely increase its interests. My wife has worked side by side with me in the apiary this summer, has taken her full share of stings and work, and is entitled to attend the Convention as well as myself. I expect her to go with me and I don't want to see so few women there that she shall feel "like a cat in a strange garret."

Allow me to give a pressing invitation to all bee-keepers to be present at Chicago. The meeting occurs the last week of the Exposition when excursion tickets can be had from nearly all points. Perhaps the BEE JOURNAL will lay us under still greater obligations by telling us just how to reach the place of meeting, and by giving us some information as to convenient hotel accommodations.

Now just as soon as you have finished reading this, please sit down at once and commence writing a list of the questions and subjects you want discussed; even if there is only a single one, write it down that you may not forget it. Then talk over with your wife the matter of her accompanying you, and tell her it will do you good, and her good to have her along. Like as not she will object that she hasn't just the right clothes to put on, or that some "woman fixen" is out of repair about her bonnet or dress, but tell her that the latest style is not to dress up much for conventions, and that other bee-keepers as well as her husband are men of sense and value a woman for her qualities of head and heart and not for the clothes she wears. Please be on hand if possible at 10 a.m.

Wednesday, Oct. 18. All lady bee-keepers are urgently invited whether they have husbands present or not.

By an oversight of the president, the notices already given say that the Northwestern Convention meets Oct. 17-18. Instead of this it adjourned last year to meet Wednesday, so please note that it meets Wednesday and Thursday Oct. 18-19.

Marengo, Ill.

SELECTIONS FROM OUR LETTER BOX

Good Work in Extracting.—I inclose you the flower of a weed that grows all through the woods here. I wish you would give the name. It has been in bloom ever since the 1st of August, and my bees have never ceased to work on it since. Bees are still booming on goldenrod. At present the nights are a little too cool for the upper stories. I think Iowa can show up with most any other State this season on honey yield, and there cannot be any better quality than ours this season. I see by the BEE JOURNAL of Sept. 13th that Dadant & Son think they have the largest day's extracting on record. On Monday, Aug. 28, working from 9 a. m. to 5 p. m., and taking 1½ hours' nooning, I extracted 500 lbs.; I did all the work of carrying the honey in and everything else, and on Saturday afternoon, Sept. 9th, I extracted 280 lbs. from 2 p. m. to 6 p. m.; and this was capped ¾ of the way down each comb. I use a 2-frame extractor. Now if any one can beat this, let them speak out.

H. O. McELHANEY.

Brandon, Iowa, Sept. 15, 1882.

[The plant is *Lophanthus scrophulariaceifolius* (giant hyssop), a plant occurring throughout a very wide region of the Northern States, not usually abundant, except in rich soils well protected from the tramping, etc., of cattle. No doubt a good honey plant, yet far inferior to many others of less vegetative vigor. T. J. BURRILL.]

My Third Annual Report.—The season just closed, although better than either of the two preceding, has not been altogether satisfactory to the bee-keeper in this section of Iowa. The spring and early summer were wet and cold. The little honey secreted by the flowers was washed out by the frequent rains. An unusually late frost, May 21st, killed many of the honey flowers; apples and plums were in bloom and completely destroyed; basswood buds were so frozen that no bloom was seen; the bees got just enough honey to keep up brood-rearing. Nearly all our surplus was stored after the middle of July. At that time, many of the colonies did not have 5 pounds of honey in the brood chamber; although they had commenced to store in the supers. With the blooming of sumac came our first extracted honey. That yielded

well, and was a profitable honey plant. The honey is thin, but of good flavor, and improves on acquaintance. After sumac, came what we call the yellow evening primrose. There happened to be a neglected field near our place, and there were acres of primrose in it, and the bees preferred it to any other flower. After the primrose came the thistle family, and they have been in bloom ever since. These three plants furnished about all the honey we obtained this year. No basswood nor white clover honey, and none from buckwheat. I heard one gentleman say that he thought there was some honey-dew in the timber, and also that he saw a great many bees on the corn tassels, but I did not notice either. Our honey is all light-colored, and that gathered after sumac disappeared is very thick, so thick that it will scarcely run through a common-sized funnel. Number of colonies last fall, 18; number this spring, say June 1st, 15; lost in wintering, 2; lost in "springing," 1; increased by natural swarming and by young queens given to nuclei, and built up, to 20. Tried to control swarming, but could not. Some colonies swarmed four times, which were returned to the old colony. I winter always in a cellar under the house with the temperature of cellar last winter 34° to 40° F. Kind of hive used similar to Langstroth in size, only the frames run across instead of lengthwise. Number of pounds surplus, extracted, 882½ lbs.; in 1½ lb. section boxes, 265½; total number pounds surplus, 1,148; average per old colonies, 76½ lbs.; largest from any one colony, 152 lbs. Some as fine honey as I ever saw was made after Sept. 1st. Quite a large amount was stored after that date. The whole family of fall yellow flowers, goldenrods, asters, artichokes, etc., were almost entirely neglected by the bees this fall. I watched in vain for a bee on them. EUGENE SECOR.

Forest City, Iowa, Sept. 22, 1882.

A Scotch Bee-Keeper in Texas.—As mentioned in my last letter to the BEE JOURNAL, on p. 507, I have continued my journey from Illinois to Texas. Through the kindness of the editor of the BEE JOURNAL, there is now another green spot in my memories of America. His letter of introduction gave me a cordial welcome at the home of Judge Andrews, and, truly, I did not journey in vain, for his apiary is a grand sight. He seems to be personally acquainted with his bees in each colony, and speaks of his queens as a good farmer does of his cattle. He has over 200 colonies of pure Italians, for which he claims two particular points of merit, beauty and docility, and I can vouchsafe for the latter, as I waded through a perfect forest of hives and never received a sting. He extracts honey with a machine of his own invention, and his harvest this year is immense. Mr. Andrews also has some of the finest cattle I ever saw. One calf, of the Jersey breed, he has been offered \$200 for. He keeps only only the best and purest stock. JAMES ANDERSON.

Allen, Texas, Sept. 20, 1882.

Bee and Honey Show in London, Ontario.—We have just had our Western Fair, and the apianian exhibit was good, showing quite plainly that bee-keepers are on the increase in Canada. We had more exhibitors and more exhibits. The honey show was very far in advance of all other years; the honey exhibited was in cans, jars, boxes, and sections of different sizes. Mr. Chalmers of Mus-sellburg, Ontario, had the largest exhibit, comprising honey, comb foundation, smokers, Knives, etc.; also a cage of Italian and one of black bees, which attracted a great deal of attention, and were the admiration of all lovers of the little busy bee. We also had the different methods of wintering explained to our satisfaction. The bee men give a very poor report, as regards the honey crop of Canada, and a great many are talking of selling out, which some of the far-seeing bee men take advantage of, and are buying at low prices, hoping to realize a handsome profit next summer, keeping in mind the old saying that "after a storm comes a calm."

W. H. WESTON.
London, Ont., Oct. 3, 1882.

That Champion Colony.—Since my unprecedented yield of honey from the horsemint, I have received many letters asking about the habits and growth of the great Texas honey plant. There are several species of the horsemint, and the best is *Monarda punctata*—stem erect, branched, glabrous, obtuse, angled, whitish; leaves oblong, lanceolate, remote and obscurely serrate, tapering at the base, smooth; flowers in whorls, and has from three to ten whorls to the flowerstalk; bracts lanceolate, colored, longer than the whorl; calyx long; corolla hairy, dotted with brown, the upper lip slightly arched, longer than the lower, and completely protects the nectar from rain, so it matters not, rain or shine, the bees never stop only when the rain is pouring down. It grows almost anywhere, in the swamps, on dry, loose, loamy soils, on the high prairies, and on the post-oak lands; grows from three to five feet high. It generally comes up about the last of December, and first of January, and begins to open its honey-laden flowers about the 20th of May, and, if seasonable, that is, if a good rainfall every 10 days, the flowers will last until the 1st of July, giving the wide-awake bee-keeper a chance for 200 lbs. and upwards of choice honey from each colony. It will grow in the fall, sown on the wheat and oat fields, and as soon as the grain is removed, about the first of May, the mint grows up rapidly and begins to bloom about the 1st of July; but very few years do we ever get any benefit from this late crop, on account of drouth. It grows well on pasture lands, as nothing will eat it. It dies out root and branch as soon as done blooming. It is not a pernicious weed, and is easily destroyed with the plow or hoe. The following is the report of the big colony: At date of last report, 700 lbs.; July 30, extracted 8½ lbs. and removed two upper stories; Aug. 23,

extracted 49 lbs.; Aug. 29, 22 lbs.; Sept. 8, 18 lbs.; I allow for waste and uncapping, 2½ lbs., which gives 800 lbs. from a single colony, the progeny of a single Cyprian queen—no increase—not an egg or particle of brood, or other help, from other colonies. My crop of spring honey is 6,000 lbs. from 36 colonies spring count. I will lose over 2,500 lbs. of fall honey, as it is not fit to use, so I have quit extracting, and my hives are full of sealed honey and some swarming. I now have 97 choice, full colonies, and 15 small colonies; lost 15 or 20 by swarming to the forest. Had I been prepared, my report would be triple this. Hope to do better another year. The fall honey is from the wild camomile, and is equal to quinine for sweetness.

B. F. CARROLL.
Dresden, Tex., Sept. 18, 1882.

A Good Profit.—My honey is not all sold, but I expect to realize \$15 per colony, spring count, from the honey, besides an increase of 100 per cent.

P. J. ENGLAND.
Fancy Prairie, Ill.

Bees have Done Finely.—Since the first of July the bees have done finely here. Mr. M. Bailey and Mr. Braught in this county have each obtained over a ton of honey. A. J. ADKINSON.
Winterset, Iowa, Sept. 30, 1882.

Position of Pure Air in Rooms.—At the Bee Convention in Toronto, Mr. Cornell tried to give some light on this subject (see page 644 of this Journal), and if true will be read with interest in connection with my remarks on page 582 of the BEE JOURNAL for Sept. 2d. Mr. Cornell's remarks are a puzzle. We have been taught that the foulest air is the heaviest; here we have it asserted that the purest is both heaviest and lightest, and that the foulest is between the two! It is lucky for small animals after all, also for the giraffe; they both get the advantage that we, poor midway creatures, are as a general thing deprived of. How is it that facts of such importance are so changeable? With statements of such importance, men must surely give opinions as facts. This impure air cannot be so very destructive to life, or it is not easy to tell how long any one may live if he walked upon stilts, with his head constantly up to the ceiling; then to overcome the difficulty of the different heights of ceilings would require several pairs of stilts. But what about the pure or impure air outside of a building, to correspond with that next the ceiling? what height would the pure air get, if the ceiling was not there? perhaps some one will inform us concerning that. We have been informed that the correct distance of the sun has not been given until lately; there is merely a few millions of miles of error, but that is not much. Are the two layers of most pure gas differently composed? One must be the heaviest, and the other the lightest to be as stated. EDWARD MOORE.

Barry, Ont., Oct. 2, 1882.

Botanical.—Again I send you some samples of flowers on which bees have been busy, in rotation. Would you be kind enough to furnish names and notes as to their value as honey producing plants. No. 1, the yellow flower, with bowl full of milky, sticky matter, is found all over the mountains from the foothills to the timber line. No. 2, the smaller yellow one, is found about the same locality. Bees began on them about Sept. 1st. No. 3, the blue flowers, are now daily covered with bees. These flowers are found both on the mountain sides and on the streams. Nos. 1 and 2 grow about 1 foot high and in large bunches of 12 to 30 flowers on each bush. No. 3 has 4 to 8 stalks 2 feet high, with 50 to 60 flowers on each stalk. I also send you a specimen of white sage that covers the mountains here. Bees do not seem to notice it here. Is it the same as that of California? Answers to the above queries will be of interest to all Colorado bee-keepers, I think.

PHILIP REARDEN.
Jamestown, Col., Sept. 9, 1882.

[No. 1, *Grindelia squarrosa*. A peculiarly western plant not known east of the Mississippi river, but growing abundantly on the plains of Nebraska and Colorado, also in Mexico. The viscid characteristics of the heads and flowers is interesting and peculiar. Will this correspondent, who has the chance observe what this last has to do with inviting or preventing the visits of insects?

No. 2, *Chrysopsis villosus* (golden aster), resembles our common asters, except that the flowers are yellow instead of white or violet. Wisconsin to Kentucky and westward. Very common on plains in Colorado.

No. 3, *Aster laevis* (smooth aster). A beautiful plant in half shady places. Common in Northern States.—T. J. BURRILL.]

From Minnesota.—I started in spring with 13 colonies. I had them in my oats bin till the 1st of March. They were strong in bees and brood. The 1st of March was very fine, and they being restless, I set them out. About the fifth we had rain, then it became cold, and before I was aware the brood was chilled. The first of June one was left; but there were more bees starved to death last spring. April and May were so cold that there were only a few days in the two months that they could fly, and in May we had a frost that killed nearly all the fruit blossoms and the basswood. There was nothing for them to get honey from till in June. Some who were quite extensive bee men lost all and quit bee-keeping. Bee men in Brown county lost nearly all. One man, out of 45 had only 3 or 4 survive the cold spring. They are mostly the common brown bee, with some Italians and hybrids, they did not swarm till in July and August. There are more bees in the woods than usual. Bees

have done well. I had a swarm come out on the 16th of July and put them in a hive with 9 frames 10x15 inches in the clear, with more or less of old combs; in one week I put on 30 1 1/4-lb. sections; they are all full. All that I have seen, say that their bees have done well this season. M. SHERER.
South Bend, Minn., Sept. 17, 1882.

A Good Report from Michigan.—We have had a very good season here. I began with 42 colonies in the spring, and now have 130, besides losing 7 or 8. I have about 2,000 lbs. of beautiful white section honey, and 2,000 more plain pine sections which will be filled in two weeks if this fine weather continues. I also have 500 lbs. of extracted honey, the quality of which cannot be surpassed. I made a mistake which I fear will prove fatal to me, in sending to a "middleman" for supplies, as his long delay in filling my order has been the cause of great loss in various channels. I am now entirely out of sections, and bees very strong. We have had a continuous honey flow throughout the season, and hence excessive swarming. We think our district is good for a big yield, for years to come.

THOS. H. SHEPHERD.

Uby, Mich., Sept. 8, 1882.

Bees Still Gathering Honey.—We have had several frosts but our bees are still gathering honey from red and white clover, asters and goldenrod. I am preparing the hives for winter as fast as possible. I will send you my report soon, and expect it will appear pretty big. S. A. SHUCK.

Bryant, Ill., Sept. 28, 1882.

A Tremendous Report.—My season's report is as follows: Cold and wet in April, May and most of June; fed all colonies from May 1st till June 4th; first swarm June 23d. Spring count, 19 colonies; increased to 71; extracted honey 3,000 pounds; one-pound sections, 1,000; from one colony of Syrian bees, 235 pounds of extracted honey and 7 swarms. All are in good condition for wintering. Best colonies for honey are one dark Italian and one light Italian—each 350 pounds extracted honey, but no swarms.

S. H. MOSS.

Colchester, Ill., Sept. 27, 1882.

The Seed of the Golden Honey Plant.—I see that some who purchased the seed of the golden honey plant have failed to get it to germinate. All of the seed sent out was first class in quality. If it failed in any case, it was from some peculiarity of soil, or in the planting or sowing. Now, if those who failed to get it to grow will write me a postal giving their post office address, I will mail to each a three-ounce packet gratis, that they may try it again. I think that if planted in the fall and covered with soil about 1/2 inch deep, it will not fail to grow in any part of the country where the ground freezes in the winter. DR. G. L. TINKER.

New Philadelphia, O.

THE AMERICAN BEE JOURNAL

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about eight words; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance. Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole paid in advance:

For 4 weeks.....	10 per cent. discount
" 8 " (3 months).....	20 " "
" 12 " (6 months).....	30 " "
" 16 " (9 months).....	40 " "
" 20 " (1 year).....	50 " "

Discount, for 1 year, in the MONTHLY alone 25 per cent., 6 months, 10 per cent., 3 months, 5 per cent., if wholly paid in advance.

Discount, for 1 year, in the SEMI-MONTHLY alone, 40 per cent., 6 months, 20 per cent., 3 months, 10 per cent., if wholly paid in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,

925 West Madison Street, Chicago, Ill.

Special Notices.

The American Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for \$1 to \$5 are 5 cents; over \$5 to \$10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club:

- For a Club of 2,—“Bees and Honey,” in paper.
- " " 3,—an Emerson Binder, or “Bees and Honey,” in cloth.
- " " 4,—Aplary Register for 50 Colonies, or Cook's Manual, paper.
- " " 5,—Cook's Manual, in cloth, or the Aplary Register for 100 Colonies.
- " " 6,—Weekly Bee Journal for 1 year, or Aplary Register for 200 Cols.

Two subscribers for the Monthly will count the same as one for the Weekly, when getting up clubs for the above premiums.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly BEE JOURNAL, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at \$1.00 a year, in advance; 2 copies for \$1.80; 3 copies for \$2.50; 5 copies for \$4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly is now permanently established, and will be continued as heretofore.

The Weekly and Monthly BEE JOURNALS will be distinct papers, each having its own sphere of operation and different readers.

We shall aim to make the Monthly BEE JOURNAL a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

New subscribers for the Weekly BEE JOURNAL for 1883, can obtain all the rest of the numbers for this year by sending \$2 to this office.

CLUBBING LIST.

We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

Publishers' Price. Club	
The Weekly Bee Journal,	\$2 00..
and Gleanings in Bee-Culture (A.I. Root) 3 00..	2 75
Bee-Keepers' Magazine (A.J. King) 3 00..	2 60
Bee-Keepers' Instructor (W. Thomas) 2 50..	2 35
The 4 above-named papers.....	4 50.. 4 00
Bee-Keepers' Exchange (Houk & Peet) 3 00..	2 80
Bee-Keepers' Guide (A.G. Hill).....	2 50.. 2 35
Kansas Bee-Keeper.....	2 60.. 2 40
The 7 above-named papers.....	6 30.. 5 50
The Weekly Bee Journal one year and	
Prof. Cook's Manual (bound in cloth) 3 25..	3 00
Bees and Honey, (T. G. Newman) " 2 75..	2 50
Binder for Weekly, 1881.....	2 85.. 2 75
Binder for Weekly for 1882.....	2 75.. 2 50
The Monthly Bee Journal and any of the	
above, \$1 less than the figures in the last column.	

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, \$4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

Articles for publication must be written on a separate piece of paper from items of business.

The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employees, or some cause beyond our control.

Constitutions and By-Laws for local Associations \$2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

When changing a postoffice address, mention the *old* as well as the new address.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or \$8 per 100.

Hundreds of clergymen, doctors and others have used Kendall's Spavin Cure with the best success. 37w4.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL, }
Monday, 10 a. m., October 9, 1882. }

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.
BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.
AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for extracted honey is very satisfactory. We have received within the last three weeks more than 200 bbls., principally from Louisiana, Mississippi and Florida, and the demand exceeds our experience and expectations. We have sold more than ever at this time of the year. Florida furnishes a honey which equals our Northern clover, and excels all the Southern honey I have had so far. There is some call for comb honey, but we have had no arrivals yet of a choice article. Comb honey brings 16@25c. on arrival; extracted, 7@10c. BEESWAX—Firm at 20@25c. per lb.
CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand is good for choice white comb honey in 1 and 2 lb. sections, and prices are without material change, 18@20c. being the range of this week's sales. White extracted, in cans, 10 @11c. in kegs and casks, 10c.; dark, 9@9½c. Dark comb honey, 12½@16.
BEESWAX—Yellow, 26c.; dark, 18@22c.
R. A. BURNETT, 165 South Water St.

SAN FRANCISCO.

HONEY—The market is firm for choice qualities but the trade is not active.
We quote white comb, 18@20c.; dark to good, 12@15c. Extracted, choice to extra white, 8½@9½c.; dark and candied, 7½@8c. BEESWAX—30@32c.
STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Plentiful and dull. Comb lower, at 15 @18c.—latter for choice white clover in small packages; strained in round lots at 6½c.; extracted in cans at 9@10c.
BEESWAX—Sold fairly at 26c. for prime.
R. C. GREER & CO., 117 N. Main Street.

NEW YORK.

HONEY—Demand slow. We quote: Comb in the small sections, white, 18@22c. Extracted, 7@10c.
BEESWAX—The stock continues light, and prime Southern held up to 30c., with little if any obtainable below 29c. Western, pure, 25@29c.; Southern, pure, 25@30c.
D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Market active. We quote ¼ lb. combs 30c. per lb.; 1 lb. combs 22@25c.; 2 lb. combs 20@22c. Extracted, in half bbls., 12@14c.
BEESWAX—Prime quality, 25c.
CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—Sells very readily in 1 lb. sections at 21@22c. for best white, and 19@20c. for 1½ to 2 lb. Second grade, 1 lb. 18@20c.; and 2 lb. 17@19 cents. Extracted is selling very slowly at 12@14c.
BEESWAX—25@28c.
A. C. KENDEL, 115 Ontario Street.

We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for \$3.00; or with King's Text-Book, in cloth, for \$2.75; or with Bees and Honey, in cloth, \$2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages).....\$1 00
" 100 colonies (220 pages)..... 1 50
" 200 colonies (420 pages)..... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

Kendall's Spavin Cure is used from the Atlantic to the Pacific coast. 40w4t

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

EXTRACTED AND COMB HONEY WANTED—for which I will pay the highest Market price. Correspondence solicited.
W. G. WATKINS,
41w4tp 172 22nd Street, CHICAGO, ILL.

SWEET CLOVER SEED.

500 POUNDS for Sale at 25 cents per pound
41w1tp BEN CLENDENON, Grinnell, Iowa.

NOTICE.

As I do not sell honey on commission, and buy only such kinds as I need in my line of trade, I cannot accept any shipments without previous correspondence.

I can sell Beeswax of any quality, and will pay the regular market price for it, in any quantity, or exchange for it comb foundation, without previous correspondence.

ALFRED H. NEWMAN,
40wtf 923 West Madison Street, Chicago, Ill.

GERMAN CARP,

For stocking ponds, Goldfish, Silver Pearl, Fringe Tails, Golden Orfes, etc. For particulars, address
MUTH & ECKARDT,
37w8t Mt. Healthy, Hamilton Co., O.

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. THOMAS G. NEWMAN,
925 West Madison Street, Chicago, Ill.

THIS PAPER may be found on file at Geo. F. Howell & Co.'s Newspaper Advertising Bureau (at Spruce St.), where advertising contracts may be made for it in NEW YORK.

EXCELSIOR HONEY EXTRACTORS.



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the \$16.00 Extractor, 13x20, which is intended for any size of frame. Excepting with the \$8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The \$8.00 and \$10.00 Extractors have no covers.

For 2 American frames, 13x13 inches.....	\$8 00
For 2 Langstroth " 10x18 "	8 00
For 3 " " 10x18 "	10 00
For 4 " " 10x18 "	14 00
For 2 frames of any size, 13x20 "	12 00
For 3 " " 12x20 "	12 00
For 4 " " 13x20 "	16 00

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

GOLDEN ITALIAN QUEENS.



1-frame Nucleus, with Tested Queen.....\$4.50
2-frame Nucleus, with Tested Queen.....5.00
Full Colony, with Tested Queen, before July 1.....12.00
Same, after July 1.....10.00
Tested Queen, before July 1.....3.00
" " after July 1.....2.50
" " per half doz.....13.50
after July 1.....13.50
Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,
1wtf Burlington, Iowa.

EVERY FARMER AND MILLER

SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book.

For sale at the BEE JOURNAL Office.

HONEY

For the past few years I have made this excellent food my leading article. Having the best established reputation in this city as a dealer in PURE HONEY direct from the Apiaries, enables me to obtain the highest market prices. Your consignments and correspondence respectfully solicited.

R. A. BURNETT, Commission Merchant,
Successor to Conner, Burnett & Co.,
28w13t 161 So. Water Street, Chicago, Ill.

LOOK HERE!

If you want cheap bees and hives to suit, good Cyprian, Albino or Italian Queens, Comb Foundation, all kinds, Section Boxes, and everything a live apiarist needs, send for prices.

Full Colonies and Nuclei a Specialty
with good young Queens Give me a call, friends, and I will try and please you. (Box 819)

E. T. FLANAGAN, Rose Hill Apiary,
5w1y Belleville, St. Clair County, Ill.

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

1w1y **D. S. GIVEN & C.,** Hoopston, Ill.

AT LULING, TEXAS.

I breed PURE ITALIAN BEES AND QUEENS for sale; manufacture Hives of any style and Comb Foundation. Dealer in Novice Honey Extractors, Bingham Smokers, and everything used by modern bee-keepers. Write for prices. Beeswax wanted.
14w3ut

J. S. TABLOCK.

FLAT-BOTTOM COMB FOUNDATION.



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

BEE SWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying 25c. per pound, delivered here, Cash on arrival. Shipments solicited.

To avoid mistakes, the name of the shipper should always be on each package.

ALFRED H. NEWMAN.

923 West Madison Street, CHICAGO, ILL.

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:

"Low Prices, Quick Returns; Customers Never Defrauded."

Italian Queens.....\$1; Tested....\$2
Cyprian Queens.....\$1; Tested....\$2
Palestine Queens.....\$1; Tested....\$2
Extra Queens, for swarming season, ready, if we are timely notified.
One-frame Nucleus, either Italian, Italian, Cyprian or Palestine, 8 frames, \$8. Safe arrival guaranteed.

20c. paid for bright wax. Money Orders on 1w1y.

HALBERT E. PAINE, late Com'r of Patents.

STORY B. LADD.

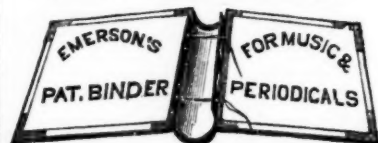
PAINE & LADD,

Solicitors of Patents and Attys in Patent Cases.
29w13t WASHINGTON, D. C.

BIND YOUR JOURNALS

AND KEEP THEM

NEAT AND CLEAN.



The Emerson Binder

IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Monthly Bee Journal.....50c.
For Weekly Bee Journal.....75c.

Address, **THOMAS G. NEWMAN,**
925 West Madison Street, Chicago, Ill.

THE AMERICAN POULTRY JOURNAL.

Is a 32-page, beautifully illustrated Monthly Magazine

POULTRY, PIGEONS AND PET STOCK

It has the largest corps of practical breeders as editors of any journal of its class in America, and is

THE FINEST POULTRY JOURNAL IN THE WORLD.

Volume 12 begins January 1891. SUBSCRIPTION:-

\$1.00 per year. Specimen Copy, 10 cents.

C. J. WARD, Editor and Proprietor.

182 CLARK ST., CHICAGO

A NEW BEE BOOK!

Bees & Honey

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,

Editor of the Weekly Bee Journal.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, 75 cents; in paper covers, 50 cents, postpaid.

925 W. Madison Street, Chicago, Ill.

Appreciative Notices.

Carefully prepared for beginners.—Farmers Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 100 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keittsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment.—Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm, Longmont, Colo.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

A Liberal Discount to Dealers by the Dozen or Hundred.

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes. Samples free on request.

CHAS. DADANT & SON,

1wly Hamilton, Hancock Co. Ill.

We now quote an

Advance of 5 Cents per pound

on the PRICES PRINTED IN OUR CIRCULARS, wholesale or retail. 15wtf

INQUIRIES

CONCERNING

THE CLIMATE,

Mines, Manufactories and Commerce

OF

COLORADO,

will be promptly and truthfully answered by private letter, upon sending One Dollar to the

Woman's Industrial Association,

15w6mp 291 Sixteenth St., DENVER, COL.

Advance in Foundation.

The manufacturers of Comb Foundation have advanced the price 5 cents per pound, owing to the increased cost of Beeswax.

Until further notice, the price of all the styles and kinds of Foundation, except the VanDeusen (flat bottom), will be

Advanced 5 Cents per pound, from the advertised price in my Catalogue.

ALFRED H. NEWMAN,

923 West Madison Street, CHICAGO, ILL

Excelsior Dunham and Vandervort FOUNDATION.

Owing to the large advance in the price of wax, I now quote prices thus: Dunham, 10 to 50 lbs., 42c.; over 50 lbs., 41c.; less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

J. V. CALDWELL,

3wly Cambridge, Henry Co., Ill.

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust an break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for \$2. Address,

BINGHAM & HETHERINGTON, 13wtf
Abronia, Mich.

SWEET CLOVER SEED,

This year's crop, all of the white variety, 28c. per pound; \$3.75 per peck; \$13.00 per bushel.

I can fill no more orders for Queens this fall, having sold all I had to spare, leaving many orders unfilled, and with orders still coming in. The advertisement in the Weekly Bee Journal did it.

I. R. GOOD,

5wly Nappanee, Elkhart Co., Ind.

New Kegs

FOR HONEY.

In order to satisfy the demand for small packages for Extracted Honey, I have heretofore procured kegs intended for syrup, fish, lard, etc., and in view of this growing trade, I now feel justified in having made to order a **Special Keg**

Designed Expressly for Honey.

These I am obliged to buy in large quantities in order to supply them at popular prices, and procure a package not used for any other purpose. They are made of Norway Pine, and have from 7 to 9 chine hoops on each end.

I have tested a sample keg by filling it DRY with white clover honey, and without the heads being painted.

It neither leaks nor flavors the Honey.

It is not necessary to paint the heads, but when painted I will guarantee them not to leak, and if well scalded, the pine will not flavor the honey.

Capacity, 175 pounds. Price, 80c. each.

The first car load of these kegs will arrive about Sept. 15th, and all orders will receive my prompt attention.

The 5 and 10 gallon kegs will be sold, as heretofore, at 40c. and 55c. each, respectively.

ALFRED H. NEWMAN,

923 West Madison Street, CHICAGO, ILL.

Scribner's Lumber and Log Book.

NEARLY A MILLION SOLD. Most complete book of its kind ever published. Gives measurement of all kinds of lumber, logs, and planks by Doyle's Rule, cubical contents of square and round timber, staves and heading bolt tables, wages, rent, board capacity of cisterns, cordwood tables, interests, etc. Standard book throughout United States and Canada. Ask your booksellers for it. Sent for 35 cents post-paid.

For sale at the BEE JOURNAL Office.



65 ENGRAVINGS.

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,

925 West Madison Street, CHICAGO, ILL.



BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including the CONQUEROR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,

923 W. Madison, CHICAGO, ILL.

QUEENS--QUEENS

Circulars free. Address,

15w6m **JOS. M. BROOKS,** Columbus, Ind.

The Bee-Keeper's Guide;

OR,

MANUAL OF THE APIARY,

By A. J. COOK,

Of Lansing, Professor of Entomology in the

State Agricultural College of Michigan.

320 Pages; 133 Fine Illustrations.

This is a new edition of Prof. Cook's Manual of the Apiary, enlarged and elegantly illustrated. The first edition of 3,000 copies was exhausted in about 18 months—a sale unprecedented in the annals of bee-culture. This new work has been produced with great care, patient study and persistent research. It comprises a full delineation of the anatomy and physiology of the honey bee, illustrated with many costly wood engravings—the products of the Honey Bee; the races of bees; full descriptions of honey-producing plants, trees, shrubs, etc., splendidly illustrated—and last, though not least, detailed instructions for the various manipulations necessary in the apiary.

This work is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. It is fully "up with the times" on every conceivable subject that can interest the apiarist. It is not only instructive, but intensely interesting and thoroughly practical.

Read the following opinions of the Book;

All agree that it is the work of a master and of real value.—*L. Apiculture*, Paris.

I think Cook's Manual is the best of our American works.—*LEWIS T. COLBY*.

It appears to have cut the ground from under future book-makers.—*British Bee Journal*.

Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—*J. P. WEST*.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—*E. H. WYNKOOP*.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—*Nich. Far.*

To all who wish to engage in bee-culture, a manual is a necessity. Prof. Cook's Manual is an exhaustive work.—*Herald*, Monticello, Ill.

With Cook's Manual I am more than pleased. It is fully up with the times in every particular. The richest reward awaits its author.—*A. E. WENZEL*.

My success has been so great as to almost astonish myself, and much of it is due to the clear, disinterested information contained in Cook's Manual.—*WM. VAN ANTWERP, M. D.*

It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record*.

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—*L'ABBE DU BOIS*, editor of the *Bulletin D' Apiculture*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Painesville, N. Y.

We have perused with great pleasure this *volume* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound, and is a credit to the West.—*Western Agriculturist*.

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowledge of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor*.

PRICE—Bound in cloth, \$1.25; in paper cover, \$1.00. by mail prepaid. Published by

THOMAS G. NEWMAN,

West Madison Street, CHICAGO, ILL.

"RED TAPE!"

Who will be the first to copy?
25,000 IN USE.

If you buy the Original Patent Bingham Bee Smoker, you will aid the inventor of improved bee smokers—get the best, that never go out—always please—never is complained of—the standard of excellence the world over—better and handsomer this season than ever before. Price per mail, postpaid, from 65 cts. to \$2. Our patents cover all the smokers that will burn sound stove-wood, or do not go out. If you buy our smokers and honey knives first, you will have to buy no others.



The Original
BINGHAM
Bee Smoker

Patented, 1878.

PRICES:

	Handed to Customer.	By Mail, Postpaid.
Wide shield Conqueror, 3 inch	\$1.75	\$2.00
Large Bingham Smoker (wide shield), 2 1/2 inch	1.50	1.75
Extra Bingham Smoker (wide shield), 2 inch	1.25	1.50
Plain Bingham Smoker, 2 inch	1.00	1.25
Little Wonder Bingham Smoker, 1 1/4 inch	.50	.65
Bingham & Hetherington Honey Knife, 2 inch	1.00	1.15

To sell again, apply for dozen or half-dozen rates.
Send for free description and testimonials, to

BINGHAM & HETHERINGTON,
Aubonia, Mich.

Sweet Clover

AND OTHER SEEDS.

Having a large stock of the new crop of Alsike, White and Sweet Clover Seeds, I can fill orders at 30c. per pound, 44¢ per peck, or \$15 per bushel.

Also, all other SEEDS for HONEY PLANTS,
Send for my Catalogue.

ALFRED H. NEWMAN,
925 West Madison Street, Chicago, Ill.

Bright Italian Queens.

200 NUCLEI.

Having filled all my orders, I can now send Queens by return mail. My customers say I send the nicest they get.

J. T. WILSON,
36wtf Mortonsville, Woodford Co., Ky.

Queens and Bees

FOR SALE—200 Untested Italian Queens—single Queen, \$1; half dozen, \$5.50; per dozen, \$10.00.

100 Tested Italian Queens—single Queen, \$2.50; per half dozen, \$13.00; per dozen, \$24.
50 Colonies of Bees, in Gallup frames, cheap.
200 Colonies of Bees, in Langstroth frames in prime condition.

J. H. ROBERTSON,
36wtf Pewamo, Ionia Co., Mich.

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc.,
Apply to

C. F. MUTH,
976 and 978 Central Ave., CINCINNATI, O.
Send 10c. for Practical Hints to Bee-Keepers.
1wtf

DUNHAM COMB FOUNDATION—40c. per pound; extra thin and bright, 10 sq. ft. to the lb. 45c. Send for samples. Wax worked 10c. per lb. F. W. HOLMES, Coopersville, Mich. 13wtf

MENDELSSOHN

PIANO Co's.



PIANOS

\$850 Square Grand Piano for only \$245.

PIANO STYLE 31 Magnificent rosewood 32 case elegantly finished, 3 strings, 7 1-3 Octaves, full patent cantante agrafes, our new patent overstrung scale, beautiful carved legs and lyre, heavy serpentine and large fancy moulding full iron frame, French Grand Action, Grand Hammers, in fact, every improvement which can in any way tend to the perfection of the instrument, has been added.

Our price for this instrument, boxed and delivered on board cars at New York, with fine Piano Cover, Stool, 40¢ and Book, only \$245.

Reduced from our late wholesale factory price, \$295, for 60 days only, to have this beautiful Piano introduced. This is now, by far, the greatest bargain ever offered the musical public. Unprecedented success! Tremendous demand for this style! Order at once.

This Piano will be sent on 15 days' test trial. Please send reference if you do not send money with order. Cash sent with order will be refunded and freight charges paid by us both ways if Piano is not just as represented. Several other special bargains: Pianos, \$160 up. Over 15,000 in use, and not one dissatisfied purchaser. Handsome Illustrated Catalogue mailed free, giving the highest testimonials ever awarded any manufacturer. Every Piano fully warranted for 5 years.

SHEET MUSIC 1/2 price. Catalogue of 3,000 choice pieces sent for 3c. stamp.

MENDELSSOHN PIANO CO.,
21amly Box 2368, New York.

EARS FOR THE MILLION!

Foo Choo's Balsam of Shark's Oil

Positively Restores the Hearing, and is the Only Absolute Cure for Deafness Known.

This Oil is abstracted from a peculiar species of small White Shark, caught in the Yellow Sea, known as *Carcharodon Rondeletii*. Every Chinese fisherman knows it. Its virtues as a restorative of hearing were discovered by a Buddhist Priest about the year 1410. Its cures were so numerous and many so seemingly miraculous, that the remedy was officially proclaimed over the entire Empire. Its use became so universal that for over 300 years no Deafness has existed among the Chinese people. Sent, charges prepaid, to any address at \$1.00 per bottle.

HEAR WHAT THE DEAF SAY!

It has performed a miracle in my case. I have no unearthly noises in my head, and hear much better. I have been greatly benefited. My deafness helped a great deal—think another bottle will cure me.

"Its virtues are UNQUESTIONABLE and its CURATIVE CHARACTER ABSOLUTE. AS THE WRITER CAN PERSONALLY TESTIFY, BOTH FROM EXPERIENCE AND OBSERVATION. Write at once to HAYLOCK & JENNEY, 7 Day Street, New York, enclosing \$1, and you will receive by return a remedy that will enable you to hear like anybody else, and whose curative effects will be permanent. You will never regret doing so."—EDITOR OF MERCANTILE REVIEW.

To avoid loss in the mails, please send money by REGISTERED LETTER.

Only Imported by **HAYLOCK & JENNEY,**
(Late HAYLOCK & CO.)

Sole Agents for America. **7 Day St., New York.**
20wtf

Books for Bee-Keepers.

Sent by mail, postpaid, on receipt of price, by
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

Bee-Keeper's Guide; or, Cook's Manual of the Apiary.—Entirely re-written, elegantly illustrated and fully "up with the times" on every subject of bee-culture. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. Cloth, \$1.25; paper cover, \$1.

Quincy's New Bee-Keeping. by L. C. Root.—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject. —\$1.50.

Novice's ABC of Bee-Culture. by A. I. Root.—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, \$1.25.

King's Bee-Keepers' Text-Book. by A. J. King.—This edition is revised and brought down to the present time. Cloth, \$1.00.

Langstroth on the Hive and Honey Bee—This is a standard scientific work. Price, \$2.

Blessed Bees. by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, 75c.

Bees and Honey. or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—Third Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, 75c.; in paper covers, 50c., postpaid.

Bienen Kultur. by Thomas G. Newman, in the GERMAN language. In paper covers, 40 cents, or 43¢ per dozen, postpaid.

Bzierzon Theory presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. 15c.

Honey, as Food and Medicine. by Thomas G. Newman.—This pamphlet discourses upon the Ancient History of Bees and Honey, the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc.; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in English and German. Price for either edition, 6c.; per dozen, 50c.

Wintering Bees.—This contains the Prize Essays on this subject, read before the Centennial Bee-Keepers' Association. Price, 10c.

Preparation of Honey for the Market. including the production and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. Price 10c.

The Hive I Use.—Being a description of the hive used by G. M. Doolittle. Price, 5c.

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. F. Dadant, giving in detail the methods and management adopted in their apiary. This contains many useful hints.—Price 15c.

Bee Pasturage a Necessity. by Thomas G. Newman.—Giving advanced views on this important subject, with suggestions what to plant, and when and how: 26 engravings. Price, 10c.

Practical Hints to Bee-Keepers. by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, 10c.

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by Thomas G. Newman. Price 5 cents.

Bees in Winter. with instructions about Chaff-Packing, Cellars and Bee Houses, by Thomas G. Newman. Price 5c.

Kendall's Horse Book.—No book could be more useful to horse owners. It has 35 engravings illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has recipes, a table of doses, and much valuable horse information. Paper, 25c.

Chicken Cholera. by A. J. Hill.—A treatise on its cause, symptoms and cure. Price, 25c.

Moore's Universal Assistant, and Complete Mechanic. contains over 1,000,000 Industrial Facts, Calculations, Processes, Trade Secrets, Legal Items, Business Forms, etc., of vast utility to every Mechanic, Farmer and Business Man. Gives 200,000 Items for Gas, Steam, Civil and Mining Engineers, Machinists, Millers, Blacksmiths, Founders, Miners, Metallurgists, Assayers, Plumbers, Gas and Steam Fitters, Bronzers, Golders, Metal and Wood Workers of every kind.

The work contains 1,016 pages, is a veritable Treasury of Useful Knowledge, and worth its weight in gold to any Mechanic, Business Man, or Farmer. Price, postage paid, \$2.50.